a scanner for effecting a scanning of the integrating detector relative to a scan window comprising one or more channels, wherein an integrated signal (S) is detected by scanning the integrating detector relative to the scan window; and

a computer for receiving the integrated signal S and for determining a scan velocity and for calculating a velocity-normalized integrated signal (Sn).

Please add new claims 26 through 65 as follows:

26. An apparatus for scanning one or more channels comprising:

means for detecting an integrated signal (S) across a scan window comprising one or more channels using an integrating detector; and

computer means for receiving the integrated signal S and determining a scan velocity and for calculating a velocity-normalized integrated signal (Sn) as a function of the scan velocity and the integrated signal S.

27. The apparatus according to claim 26, further comprising the integrating detector.

28. The method of claim 1, further comprising determining an integration time (ti) for the integrated signal; and

wherein the calculating the velocity-normalized integrated signal comprises dividing the integrated signal (S) by the integration time (ti),

and wherein the scan window comprises more than one channel.

29. The method of claim 28, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

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30. The method of claim 29, wherein the integrating detector comprises at least one of a CCD and a photodiode array.

31. A data collection method for scanning a scan window comprising:

detecting an integrated signal (S) across a scan window comprising one or more channels using an integrating detector;

determining an integration time (ti) for the integrated signal; and

calculating a velocity-normalized integrated signal (Sn), the calculating comprising dividing the integrated signal (S) by the integration time (ti).

32. The method of claim 31, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

33. The method of claim 32, further comprising determining a detector offset (So); determining an offset adjusted unnormalized signal as the difference (S - So); and wherein the calculating the velocity-normalized integrated signal (Sn) comprises dividing the offset adjusted unnormalized signal by the integration time (ti).

34. The method of claim 33, wherein determining the offset adjusted unnormalized signal further comprises multiplying the difference (S - So) by a scaling factor (tn).

35. The method of claim 32, wherein the channels are disposed in a linear array.

36. The method of claim 32, wherein the channels comprise lanes in a multilane electrophoresis system.

37. The method of claim 36, wherein the lanes are located in a slab gel.

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38. The method of claim 36, wherein the lanes are located in isolated electrophoresis channels.

39. The method of claim 36, wherein the multilane electrophoresis system has a lane density of at least 1.8 mm/lane.

40. The method of claim 32, wherein detecting the integrated signal comprises using a stepper motor to cause a relative motion between the scan window and the integrating detector.

41. The method of claim 40, wherein a position sensor is used to define a home position for initializing the stepper motor.

42. The method of claim 32, wherein the integrating detector comprises at least one of a CCD and a photodiode array.

43. The method of claim 32, wherein the integrated signal results from detection of a fluorescence emission.

44. The method of claim 43, wherein the fluorescence emission is stimulated by a laser.

45. The apparatus of claim 16, further comprising means for determining an integration time (ti) for the integrated signal; and wherein the calculating the velocity-normalized signal comprises dividing the integrated signal (S) by the integration time (ti).

46. The apparatus of claim 45, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

47. The apparatus of claim 46, further comprising the integrating detector.

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48. An apparatus for scanning one or more channels comprising:

means for detecting an integrated signal (S) across a scan window comprising one or more channels using an integrating detector;

means for determining an integration time (ti) for the integrated signal; and

computer means for receiving the integrated signal (S) and the integration time (ti), and for determining a velocity-normalized integrated signal (Sn), the determining comprising dividing the integrated signal (S) by the integration time (ti).

49. The apparatus of claim 48, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

50. The apparatus of claim 49, wherein the computer means comprises the means for determining the integration time (ti).

51. The apparatus of claim 49, further comprising the integrating detector.

52. The apparatus of claim 17, further comprising a timer configured to determine an integration time (ti) for the integrated signal; and wherein the calculating the velocity-normalized signal comprises dividing the integrated signal (S) by the integration time (ti), and the scan window comprises more than one channel.

53. The apparatus of claim 52, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

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54. An apparatus for scanning a scan window having one or more channels comprising:

an integrating detector;

a scanner configured to scan the integrating detector relative to the scan window, wherein an integrated signal (S) is detected by scanning the integrating detector relative to the scan window;

a timer configured to determine an integration time (ti) for the integrated signal; and

a computer configured to receive the integrated signal (S) and the integration time (ti), and to determine a velocity-normalized integrated signal (Sn), the determining comprising dividing the integrated signal (S) by the integration time (ti).

55. The apparatus of claim 54, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

56. The apparatus of claim 55, wherein the computer is configured to determine the integration time (ti).

57. The apparatus of claim 55, wherein the integrating detector comprises a charged coupled device.

58. The apparatus of claim 55, wherein the scanner comprises a stepper motor.

59. The apparatus of claim 55, wherein the scan window comprises multiple electrophoresis lanes.

60. The program storage device of claim 21, wherein the method further comprises determining an integration time (ti) for the integrated signal (S); the calculating the

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velocity-normalized integrated signal (Sn) comprises dividing the integrated signal (S) by the integration time (ti); and the scan window comprises more than one channel.

61. The program storage device of claim 60, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

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62. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform a method to scan a scan window comprising one or more channels, said method comprising:

detecting an integrated signal (S) across a scan window comprising one or more channels using an integrating detector;

determining an integration time (ti) for the integrated signal (S); and

calculating a velocity-normalized integrated signal (Sn), the calculating comprising dividing the integrated signal (S) by the integration time (ti).

63. The program storage device of claim 62, wherein determining the integration time (ti) comprises determining a start time (ts) at a start of the detecting the integrated signal; determining an end time (te) at an end of the detecting the integrated signal; and determining the integration time (ti) as a difference of the end time (te) and the start time (ts).

64. The program storage device of claim 63, wherein the method further comprises determining a detector offset (So); determining an offset adjusted unnormalized signal as the difference (S - So); and wherein the calculating the velocity-normalized

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